**3.a.4.5**

**Group Members: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**atmosphere and Meteorology Project**

**General Directions**: Your group will be given three of the Virginia Beach Objectives related to this unit. Your group will be responsible for **researching the objectives, creating a lesson and developing an activity** to teach the three objectives you have been assigned to the rest of the class. Guiding questions have been provided to help you cover each objective. You will be using a PowerPoint slideshow to use as a visual aid to teach the lesson.

**Step 1**: Research your objective using books and resources provided (Databases located at <https://destiny.vbcps.com> and books). Take notes. Be sure to answer the guiding questions in a way that you can easily explain to your classmates. Diagrams, charts and graphs are great tools to visually interpret information. Collect citation information and save to a location you can access (jump drive, H Drive or SharePoint).

**Step 2:** Organize your information so that you can easily share it with others. Develop a PowerPoint presentation with your group to cover your topic. All group members must contribute to the PPT and participate in the presentation. Use the following format as a template for your PowerPoint.

PowerPoint format :

Slide 1-State Key Concept/Topic

Slide 2:  State objective

Slide 3-4:  Guiding Question with 3-5 bullet points

Slide 5:  State Objective

Slide 6-7:  Guiding Question with 3-5 bullet points

Slide 8:  State Objective

Slides 9-10:  Guiding Question with 3-5 bullet points

Slide 11:  Bibliography

Relevant photos/pictures throughout

**Step 3:** Develop activity to be used by classmates during lesson. All group members must contribute to the activity.

Webbing-Develop a webbing with three key concepts including impacts and effects. Leave 5 key concepts blank for students to fill in.

**Step 4:** As a group practice teaching your lesson. Remember to use the PowerPoint as a guide but do not read it to the class.

**ES3.a Evolution, Structure, Composition of the Atmosphere**

**3.a.4 Explain the importance of ozone in the stratosphere and the cause and effect of its depletion (chlorofluorocarbons).**

*What is the role of the ozone in the atmosphere?*

*How does it protect the Earth?*

*What is causing the ozone problem?*

*What can we do to resolve the ozone problem?*

**3.a.5 Explain how volcanic activity or meteor impacts could affect the atmosphere and life on Earth.**

*How do volcanic eruptions impact the atmosphere?*

*What are the negatives impacts from large eruptions throughout history?*

*How can volcanic eruptions impact humans?*

*What are examples you can share with the class?*

**3.a.6 Identify and describe the effects of atmospheric pollutants resulting from human, biologic and geologic activities.**

*What are examples of pollutants that are found in the atmosphere?*

*What are pollutants caused only by humans?*

*What are the effects of these pollutants on the atmosphere?*

**Fast Facts:**

-Ozone was necessary for the development of life on Earth’s surface.

-The composition of the atmosphere can change due to human, biologic, and geologic activity.

- The stratosphere has two important layers: the ozone and the jet stream.

-Most meteoroids burn up in the mesosphere, producing meteor trails.